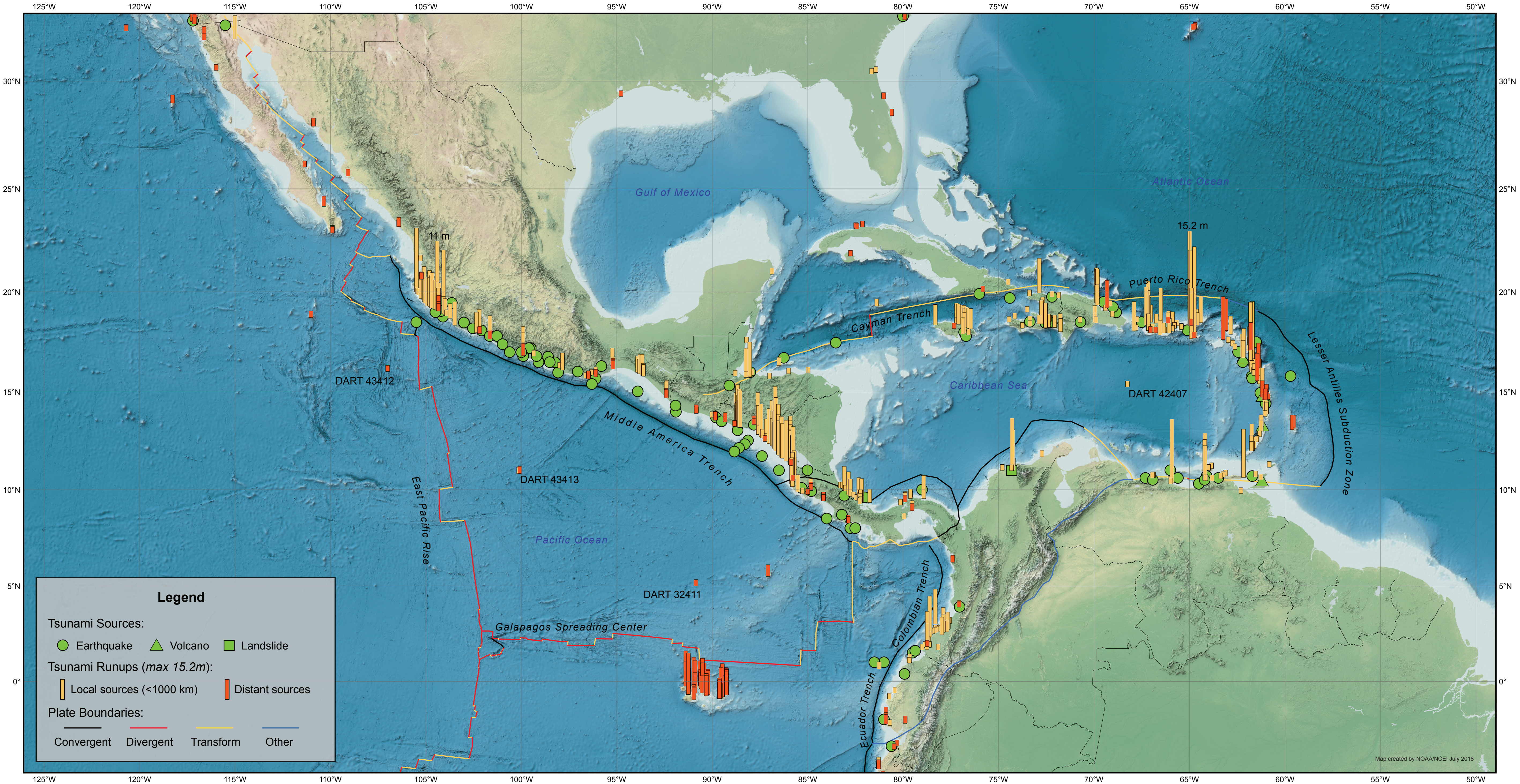


Historical Tsunamis (1530 to 2018) Caribbean, Central America, Mexico and Adjacent Regions



NOAA's National Centers for Environmental Information (NCEI) and co-located World Data Service (WDS) for Geophysics and the International Tsunami Information Center (ITIC), a UNESCO/IOC-NOAA partnership, have collaborated to produce a map showing the tsunami hazard for Caribbean, Central America, Mexico and Adjacent Regions. The information comes from the NCEI/WDS Historical Tsunami Database that includes information on tsunami source events throughout the world that range from 1410 B.C. to June A.D. 2018.

Thirty-six tsunamis in the region caused damage ranging from a few shipping crafts to the destruction of entire towns. Eighteen resulted in over 6,400 deaths. The most deadly was the 1692 Jamaica tsunami that resulted in 2,000 deaths at Port Royal. The 1946 Dominican Republic earthquake-generated tsunami caused 1,790 deaths in Mantanzas. In 1906 an earthquake off the coast of Ecuador generated a tsunami that caused 1,000 deaths in Colombia, and was observed along the entire coast of Central America, in Mexico, and in California.

A total of 61 confirmed tsunami source events are displayed on the Pacific region of this map; 60 were generated by earthquakes, and 1 from an earthquake-generated landslide. There are over 750 runup records (locations where tsunami waves were observed by eyewitnesses, field reconnaissance surveys, tide gauges, or deep-ocean sensors) displayed on the Pacific region. The runups include data from 37 tsunami sources beyond the map boundaries, mostly originated from Alaska, Chile, Japan, Peru and Russia. The highest runup on the displayed Pacific region was the 11 m tsunami wave generated by the 1995 Jalisco-Colima earthquake.

A total of 51 confirmed tsunami source events are displayed in the Caribbean Sea and Atlantic Ocean; 37 were generated by earthquakes, 5 from earthquake-generated landslides, 6 from volcanoes, 2 from volcano-generated landslides, and 1 from a submarine landslide. Over 300 runup records are displayed on the Caribbean Sea, Atlantic Ocean and Gulf of Mexico. In this area, the highest runup was the 15.2 m tsunami wave generated by violent back-to-back earthquakes southwest of St. Thomas, U.S. Virgin Islands, in 1867. Only 5 events beyond the map boundaries resulted in runups to the displayed Caribbean, Atlantic and Gulf of Mexico coastlines.

Table 1. Tsunamis Causing Deaths in the Caribbean Islands

Date	Year	Mon	Day	Source Location	Locations that reported casualties	Estimated Dead or Missing
1692	6	7	Jamaica	Port Royal, Jamaica		2000
1842	5	7	Haiti	Port-de-Paix, Haiti		300
1867	11	18	Virgin Islands (USA)	Virgin Islands (USA)		24
1918	10	11	Puerto Rico (USA)	Puerto Rico (USA)		140
1946	8	4	Dominican Republic	Matanzas, Dominican Republic		1790
1946	8	8	Dominican Republic	Santo Domingo, Dominican Republic		75
2010	1	12	Haiti	Petit Paradis, Haiti		7

Table 2. Tsunamis Causing Deaths in Central America, Colombia, Ecuador and Mexico

Date	Year	Mon	Day	Source Location	Locations that reported casualties	Estimated Dead or Missing
1787	3	28	Mexico	Acapulco, Mexico		11
1882	9	7	Panama*	San Blas, Panama		100
1902	2	26	El Salvador	El Salvador		185
1906	1	31	Ecuador	Colombia		*1000
1932	6	3	Mexico	Jalisco, Mexico		4
1932	6	22	Mexico	Cuyutlan, Mexico		75
1958	1	19	Ecuador	Esmeraldas, Ecuador		4
1979	12	12	Colombia	Tumaco, Colombia		*600
1991	4	22	Costa Rica*	Canal de el Matina, Costa Rica		2
1992	9	2	Nicaragua	Nicaragua		170
1995	10	9	Mexico	Barra de Navidad, Mexico		1

*Caribbean coast

*May include earthquake deaths

Table 3. Tsunami Runups in the Caribbean Islands (including Venezuela)

Location	Maximum Runup Height (m)		Total Number of Runups
	Tide Gauge	Eyewitness & Field Survey	
Antigua and Barbuda	0.30	3.7	9
Barbados	0.46	1.5	5
Bermuda (UK)	0.12	*OBS	6
British Virgin Islands (UK)	-	3.6	4
Cuba	-	*OBS	7
Dominica	0.12	3.7	5
Dominican Republic	0.06	5.0	14
Grenada	-	3.1	8
Guadeloupe (France)	1.00	10.0	23
Haiti	-	5.0	36
Jamaica	-	2.5	15
Martinique (France)	-	4.0	13
Montserrat	-	4.0	4
Puerto Rico (USA)	0.66	6.1	35
Saba (Netherlands)	-	6.4	2
Saint Barthelémy (France)	-	2.1	2
Saint Kitts and Nevis	-	*OBS	3
Saint Lucia	-	1.2	5
Saint Martin (France & Netherlands)	-	4.5	2
Saint Vincent and The Grenadines	-	1.8	6
Sint Eustatius (Netherlands)	-	*OBS	1
Trinidad and Tobago	-	*OBS	3
Venezuela	0.08	10.0	24
Virgin Islands (USA)	0.09	15.2	25

*Unknown runup height

Table 4. Tsunami Runups in Central America, Colombia, Ecuador, and Mexico

Location	Pacific			Caribbean		
	Maximum Runup Height (m)	Total Number of Runups		Maximum Runup Height (m)	Total Number of Runups	
Belize**	-	-	-	0.02	-	2
Colombia	0.20	6.0	51	0.25	8.0	7
Costa Rica	0.55	4.0	40	-	3.0	10
Ecuador***	2.26	6.1	219	-	-	-
El Salvador***	0.58	6.3	56	-	-	-
Guatemala	0.49	-	5	-	4.0	3
Honduras	-	-	-	0.12	5.0	7
Mexico	1.76	10.9	223	0.08	-	1
Nicaragua	0.40	9.9	68	-	-	-
Panama	0.70	*OBS	11	0.76	3.0	17

**No Pacific coastline

***No Caribbean coastline

*Unknown runup height